Knobbe Martens Olson & Bear LLP

Intellectual Property Law

550 West C Street
Suite 1200
San Diego CA 92101
Tel 619-235-8550
Fax 619-235-0176
kmob.com

May 19, 2004
5:20 PM

ORIGINAL WILL FOLLOW VIA:

- ☐ Mail
- ☐ Courier
- ☐ International Airmail
- ☐ Hand Delivery
- ☒ Will Not Follow
- ☐ With Enclosures
- ☐ Without Enclosures

Facsimile Transmittal Sheet

Confidentiality Notice:

TO: Examiner Maria B. Marvich, Ph.D.

FIRM: U.S. Patent and Trademark Office

FACSIMILE NO.: 703-872-9306

FROM: Erik T. Anderson

CLIENT CODE: UC081.001A

PAGES: 5 (INCLUDING THIS SHEET)

IF YOU DID NOT RECEIVE ALL OF THE PAGES, PLEASE CALL BACK IMMEDIATELY.

MESSAGE:

I attach possible claim amendments for discussion purposes only. We look forward to the Telephonic Interview scheduled for 1:00 p.m. (EST) on 5/20/04.

To: Examiner Maria B. Marvich, Ph.D.

Possible Claim Amendments for discussion during Interview 5/20/04

U.S. Application No. 10/042,775

Attorney ref: UC081.001A

NOT FOR ENTRY INTO THE FILE

1. A method for recombinantly producing functional ataxia-telangiectasia (ATM) protein, comprising:

providing a viral vector comprising a cDNA encoding the ATM protein operably linked to a promoter;

infecting ATM deficient mammalian L3 cells with said viral vector, wherein said mammalian L3 cells are thereby made to produce functional ATM protein; and

isolating said functional ATM protein produced by said mammalian L3 cells.

2. The method of Claim 1, wherein said viral vector comprising a cDNA encoding the ATM protein operably linked to a promoter is a vaccinia viral vector.

3. (cancelled) ~~The method of Claim 1, wherein said viral vector comprising a cDNA encoding the ATM protein operably linked to a promoter is a variola viral vector.~~

4. (cancelled)

5. The method of Claim 1, wherein said promoter is a synthetic early/late viral promoter.

6. (cancelled) ~~The method of Claim 1, wherein said mammalian cells are human cells.~~

7. (cancelled) ~~The method of Claim 1, wherein said ATM deficient mammalian cells are HeLa cells.~~

8. (cancelled)

9. (cancelled) ~~The method of Claim 1, wherein said ATM deficient mammalian cells are L3 cells.~~

10. The method of Claim 1, further wherein said ATM-deficient mammalian L3 cells producing said functional ATM protein exhibit regain of ATM function.

11. The method of Claim 1 wherein isolating said functional ATM protein comprises binding an anti-ATM antibody to said ATM protein.

12. The method of Claim 1, where said cDNA encoding the ATM protein is modified to comprise a FLAG epitope.

13. The method of Claim 12, wherein isolating said functional ATM protein comprises binding an antibody specific for the FLAG epitope to said ATM protein.

14. The method of Claim 1, wherein said functional ATM protein is produced at a level of greater than 2 μg substantially purified ATM protein per 300 grams fresh weight of host cells or host tissue.

15. The method of Claim 1, further wherein said functional ATM protein is capable of phosphorylating ATM substrates.

16. The method of Claim 15, wherein said substrates comprise p53 and PHAS-1.

17. A method for recombinantly producing functional ataxia-telangiectasia (ATM) protein, comprising:

providing a vaccinia viral vector comprising a cDNA encoding the ATM protein operably linked to a promoter;

infecting mammalian cells with said vaccinia viral vector, wherein said mammalian cells produce functional ATM protein; and

isolating said functional ATM protein produced by said mammalian cells by binding an anti-ATM antibody to the ATM protein;

wherein the yield of functional ATM protein is at least 2 μg substantially purified ATM protein per 300 grams fresh weight of mammalian cells.

18. The method of Claim 17, wherein said the yield of functional ATM protein is greater than 5 μg substantially purified ATM protein per 300 grams fresh weight of mammalian cells.

19. The method of Claim 17, wherein said mammalian cells are human cells.

20. (cancelled)

21. The method of Claim 17, where said cDNA encoding the ATM protein is modified to comprise a FLAG epitope.

22. (cancelled)

23. A method for recombinantly producing functional ataxia-telangiectasia (ATM) protein, comprising:

providing a vaccinia viral vector comprising a cDNA encoding the ATM protein operably linked to a promoter;

infecting mammalian cells with said vaccinia viral vector, wherein said mammalian cells produce functional ATM protein; and

isolating said functional ATM protein produced by said mammalian cells wherein said functional ATM protein is produced at a level of greater than 2 μg substantially purified ATM protein per 300 grams fresh weight of host cells or host tissue.

24. The method of Claim 23, wherein said mammalian cells are human cells.

25. The method of Claim 23 wherein said mammalian cells are L3 cells.

26. The method of Claim 23, wherein said isolating said functional ATM protein comprises binding an anti-ATM antibody to the ATM protein.

27. The method of Claim 23, where said cDNA encoding the ATM protein is modified to comprise a FLAG epitope.

28. The method of Claim 23, wherein isolating said functional ATM protein comprises binding an antibody specific for the FLAG epitope to said ATM protein.

29. (new) A method for recombinantly producing functional ataxia-telangiectasia (ATM) protein, comprising:

providing a vaccinia viral vector comprising a cDNA encoding the ATM protein operably linked to a promoter;

infecting ATM deficient mammalian cells with said vaccinia viral vector, wherein said mammalian cells are thereby made to produce functional ATM protein; and

isolating said functional ATM protein produced by said mammalian cells.

30. (new) The method of Claim 29 wherein said promoter is a synthetic early/late viral promoter.

31. (new) The method of Claim 29 wherein said mammalian cells are human cells.

32. (new) The method of Claim 29 wherein said ATM deficient mammalian cells are L3 cells.

33. (new) The method of Claim 29, wherein said ATM-deficient mammalian cells producing said functional ATM protein exhibit regain of ATM function.

34. (new) The method of Claim 29 wherein isolating said functional ATM protein comprises binding an anti-ATM antibody to said ATM protein.

35. (new) The method of Claim 29, wherein said cDNA encoding the ATM protein is modified to comprise a FLAG epitope.

36. (new) The method of Claim 35, wherein isolating said functional ATM protein comprises binding an antibody specific for the FLAG epitope to said ATM protein.

37. (new) The method of Claim 29, further wherein said functional ATM protein is capable of phosphorylating ATM substrates.

38. (new) The method of Claim 37, wherein said substrates comprise p53 and PHAS-1.

S:\DOCS\ETA\ETA-2134.DOC
051904